# Aquatic Ecosystems

- Classified by
  - Depth
  - Flow
  - Temperature
  - Chemistry

Freshwater

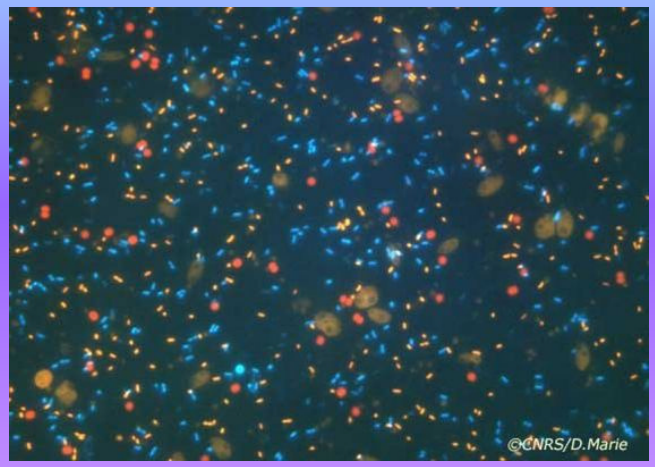
Marine

# FRESHWATER

- Flowing Water Ecosystems
  - Start in mountains or hills and flow downhill
  - Fast moving water near source
  - Few plants
  - Examples
    - Rivers
    - Streams
    - Creeks

# FRESHWATER

- Standing Water
  - ***Plankton*** =
    - Tiny, free-floating organisms
    - ***Phyto*** = plants
    - ***Zoo***= animals
  - Examples
    - Lakes
    - Ponds




# FRESHWATER

- Freshwater Wetlands
  - Water covers soil
  - May be temporary
  - Can differ in type based on
    - Location
    - Fresh or salty water
    - Other chemical characteristics
    - Flow rate
    - General climate
    - Animal populations
    - Year-round vs seasonal
  - Examples
    - ***Bogs*** ⇨ (Spongy peat deposits in standing water)
    - ***Marshes*** ⇨ (Dominated by grasses)
    - ***Swamps*** ⇨ (Flooded forests)

– Function and value of wetlands

- Protection from storms
- Absorb and store water
- Flood control
- Habitat for diverse wildlife
- Filter and purify water
- Air quality
- Irrigation
- Recreation
- Commercial resources
- Nurseries for many species

# FRESH AND SALT

- Estuaries
  - Wetlands formed where rivers meet sea
  - Mixture of fresh and salt water
  - Spawning and nursery grounds

# MARINE

- Intertidal Zone
  - Under water once or twice a day
  - Often exposed to air, sunlight, temperature changes
  - Barnacles, sea stars

# MARINE

- Coastal Ocean
  - Low tide to edge of continental shelf
  - Kelp forests
    - Brown algae

# MARINE

- Open Ocean
  - Edge of continental shelf out
  - Largest marine zone
    - 90% of ocean

# MARINE

- Benthic Zone
  - Ocean floor
  - ***Benthos*** =
    - Organisms that live near or attached to bottom

# MARINE

- Coral Reefs
  - World's most diverse marine ecosystems
  - Some are greater than 4500 years old
  - Slow growing
  - Largest
    - Great Barrier Reef
  - Built by cnidarians
    - Reproduce asexually by budding
    - Skeleton remains behind when coral dies
  - 3 types of reefs
    - Fringing reef
    - Barrier reef
    - Atoll

# Fringing Reef

# Barrier Reef

# Atolls

# PARROTFISH

"In the end we will conserve only what we love, we will love only what we understand, and we will understand only what we are taught" - Baba Dioum